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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,735	05/25/2004	Chih-Chiang Wen	MTKP0165USA	3734
27765	7590	03/19/2009	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			PORTKA, GARY J	
		ART UNIT	PAPER NUMBER	
		2188		
		NOTIFICATION DATE	DELIVERY MODE	
		03/19/2009	ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

winstonhsu.uspto@gmail.com  
Patent.admin.uspto.Rcv@naipo.com  
mis.ap.uspto@naipo.com.tw

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/709,735	WEN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Gary J. Portka	2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 21 January 2009.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-4,7-12,14-16,18-23,25-28 and 30-35 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-4,7-12,14-16,18-23,25-28 and 30-35 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 21, 2009 has been entered.
2. Claims 1, 8, 10, 11, 14, 16, 18, 19, 21, 25-27 and 31 were amended by Applicant. Claims 1-4, 7-12, 14-16, 18-23, 25-28, and 30-35 are pending.

### ***Response to Arguments***

3. Applicant's arguments have been considered but are moot in view of the new grounds of rejection. It is noted that while it was stated previously that Hu does not disclose initialization data received from the host, as discussed below it is clear that Hu describes a typical firmware update, before a device can be initialized, and thus initialization data as recited.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 7, 11, 15, 16, 20, 21, 25, 27, and 30 are rejected under 35 U.S.C. 103(e) as being obvious over Lewis et al., US 2003/0097552 A1 (hereinafter "Lewis") and Hu, US 6,170,043 B1 (hereinafter "Hu").

6. As to claims 1, 7, 11, 15, 16, 20, 21, 25, 27, and 30, Lewis discloses a circuit (Fig. 1), download mode, computer system, and controller comprising bus interface (at 106) for communications with a host (management device, 0010), an interface unit electrically coupled to the bus interface for downloading operational firmware from the host (connections between 106 and 112), a control circuit (including 110, 114, 116, and their connections) electrically coupled to the interface unit for transferring the downloaded operation firmware to a volatile memory (112), microprocessor (108) electrically coupled to the control circuit for executing the downloaded operational firmware while stored in the volatile memory, wherein the microprocessor controls the normal operations of the device circuit according to the downloaded firmware (see Abstract, 0010, 0027, 0038). Lewis also discloses receiving initialization data from the host (0030, 0031, 0039, "boot PROM routines").

7. Lewis does not specifically disclose that the operational firmware and initialization data is received in a startup procedure. While Lewis clearly provides for the ability to update these elements, the system as disclosed is initialized before any operation occurs, and therefore appears to only provide for receiving new initialization after the system is operating. However, Hu discloses a similar firmware controlled device (Fig. 2) in which when a system is in a startup procedure, it is determined before initializing a device whether the firmware should be updated, that is, received from a

host, before the device is initialized. See Hu Figs. 6 and 7, and col. 5 lines 25-37.

Clearly the firmware mentioned includes the two categories of operational firmware and initialization data, since this must be downloaded/received before the device can initialize, further Applicant has admitted that such known firmware is comprised of these two categories. It is noted that item 310 "initialize" of Fig. 6 is an instruction to the microprocessor to initialize, which is done by performing the remaining steps of Figs. 6 and 7; it is not an initialization of the device. The firmware is downloaded/received as part of a startup procedure as recited. This provides the clearly seen advantage of allowing updates to the controlling firmware before initializing a device with outdated firmware. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to receive the firmware and initialization data in a startup procedure, because this was a known means of providing the most up-to-date control for a device.

8. As to claims 2, 14, 18, 23, and 28, Hu further discloses the circuit of claim 1 wherein the bus interface conforms to USB, IDE, SATA, SAS, or SCSI interface standards (Fig. 2, col. 2 lines 59-65, col. 3 lines 45-46). These would have been obvious to an artisan to add to the Lewis-Hu prior art combination discussed above to provide compatibility with systems using these standards.

9. As per claims 8, 31, 34, and 35, Hu further discloses the circuit of claim 1 wherein the microprocessor executes the downloaded operational firmware without accessing a non-volatile memory, accessing volatile memory (Fig. 2, 212 and 202, col. 3 lines 48-57, col. 4 lines 8-19, col. 6 lines 17-28). This would have been obvious to an artisan to add to the Lewis-Hu prior art combination discussed above to avoid or reduce

the need for the expense of non-volatile memory, and/or its reduced performance versus RAM.

10. As to claim 9, 12, and 22, Hu further discloses the circuit of claim 1 wherein the normal operations of the circuit at least include reading data from an optical disc (col. 3 lines 62-66), and controlling its rotation. This would have been obvious to an artisan to add to the Lewis-Hu prior art combination discussed above to use these firmware update circuits for an optical disk drive.

11. As to claims 10 and 26, Lewis further discloses the circuit of claim 1 wherein the volatile memory comprises the downloaded operational firmware being executed by the microprocessor to control normal operations of the circuit (0010).

12. As to claim 19, the disclosure of Hu discussed above includes the method of claim 16 further comprising the device transmitting an electrical signal to an application program in the host to begin downloading the operational firmware (col. 5 lines 25-27).

13. As to claim 32, 33, Hu further discloses the circuit of claim 27 wherein the host system comprises the volatile memory, or shared by the host and the microprocessor (Figure 2, #212 & col. 4 lines 8-19). This would have been obvious to an artisan to add to the Lewis-Hu prior art combination discussed above to avoid the expense or space limitations of separate volatile memory at the device.

14. Claims 3 & 4 are rejected under 35 U.S.C. 103(a) as being obvious over Lewis and Hu, as applied to claim 1 above, and further in view of Kamihara et al (US PGPub # 2002/0169904), herein Kamihara.

15. Neither Lewis nor Hu expressly disclose using macros. However, as per claim 3, Kamihara teaches the use of a circuit like that of claim 1 wherein the interface unit is a macro (Figure 6, #20 & ¶0095).

16. As to claim 4, Kamihara further discloses the circuit of claim 3 wherein the macro comprises handshaking, data reception, and writing received data into the memory functions [¶0095-0097 & ¶0102].

17. Lewis, Hu and Kamihara are analogous art because they are from the same field of endeavor: computer system memory management. At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine a macro interface unit, as disclosed by Kamihara, within the system disclosed by the Lewis-Hu combination. The motivation for doing so would have been for the benefit of aiding the implementation of data transfers, as taught by Kamihara in ¶0096.

### ***Conclusion***

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary J. Portka whose telephone number is (571) 272-4211. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on (571) 272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gary J Portka/  
Primary Examiner  
Art Unit 2188  
March 16, 2009